Claims

What is claimed is:

1. A semiconductor device comprising:

a gate insulating film provided on a semiconductor layer;

a gate electrode provided on the gate insulating film;

and

a source region and a drain region provided in the semiconductor layer at two sides of the gate electrode;

wherein the source and the drain regions comprise:

first impurity diffusion layers formed of a specific impurity introduced in the semiconductor layer adjacent two sides of the gate electrode; and

second impurity diffusion layers provided in the semiconductor layer adjacent the first impurity diffusion layers and opposite from the gate electrode, the second impurity diffusion layers being in contact with the first impurity diffusion layers; and

wherein the first impurity diffusion layers comprise:

a diffusion suppression impurity for suppressing diffusion of the specific impurity into the semiconductor layer.

2. The semiconductor device according to Claim 1, wherein the diffusion suppression impurity is located in the semiconductor layer under the gate electrode.

3. A method for manufacturing a semiconductor device, comprising:

a step of forming a gate insulating film on a semiconductor layer;

a step of forming a gate electrode on the gate insulating film;

a step of introducing a diffusion suppression impurity into the semiconductor layer using the gate electrode as a mask, the diffusion suppression impurity suppressing diffusion of a specific impurity into the semiconductor layer;

a step of introducing the specific impurity into the semiconductor layer in which the diffusion suppression impurity had been introduced to form first impurity diffusion layers; and

a step of introducing another impurity into regions of the first impurity diffusion layers of the semiconductor layer to form second impurity diffusion layers, the regions each being spaced apart from the gate electrode by a predetermined distance.

4. A method for manufacturing a semiconductor device, comprising:

a step of introducing a diffusion suppression impurity for suppressing diffusion of a specific impurity into a semiconductor layer and forming a gate insulating film on the semiconductor layer;

a step of forming a gate electrode on the gate insulating film;

a step of introducing the specific impurity into the semiconductor layer using the gate electrode as a mask to form first impurity diffusion layers; and

a step of introducing another impurity into regions of the first impurity diffusion layers of the semiconductor layer to form second impurity diffusion layers, the regions each being spaced apart from the gate electrode by a predetermined distance.

5. The method for manufacturing a semiconductor device according to

Claim 4, wherein the step of introducing a diffusion suppression impurity into a semiconductor layer and forming a gate insulating film thereon further comprises a step of forming a gate insulating film containing the diffusion suppression impurity on the semiconductor layer so as to diffuse the diffusion suppression impurity into the semiconductor layer.

6. A semiconductor device comprising:

a gate insulating film provided on a semiconductor layer;

a gate electrode provided on the gate insulating film;

and

a source region and a drain region provided in the semiconductor layer along two sides of the gate electrode;

wherein the source and drain regions comprise:

first impurity diffusion layers adjacent the two sides of the gate electrode, the first impurity diffusion layers including a specific impurity; and

second impurity diffusion layers abutting the first impurity diffusion layers opposite the gate electrode; and

wherein the specific impurity diffusion layers comprise:

a diffusion suppression impurity that suppresses diffusion of the specific impurity into the semiconductor layer.